



DART
AEROSPACE

Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

003542

D412-664-203
Job Sheet 173463



Part No: D412-664-203 **Job Qty:** 1 ea

Part Name: Aft Crosstube - High



Part Weight: 0 lbs **Status:** Scheduled **Priority:** Medium

Job Created: 3/2/18 **Job Tracking No:**

Due Date: 3/16/18 **Created By:** Michelle Gagnon-Donovan

Type: Stock **Description:**

Note: DWG REV F IPP Rev:E 04.02.16 Reformat; Added D3189-1 K/DS IPP Rev:F 06-03-29 Remove Comments on Pick List JLM IPP Rev:G 06.12.08 per ECN 886 EC IPP Rev:H 07-04-30 As per Rev D JLM IPP Rev:I 08-06-12 add comment in seq. 21 DD verified by:EC IPP rev J 11.04.21 DEO D412-664-243-E-1 EC verified DD IPP REV:K 11.10.03 DEO D412-664-243-E-2 DD ver:EC

Ship Via:

Bill of Materials

TRN 5031700

Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON K6A 1K7
TEL: 1 (613) 632-5200
Email: sales@dartaero.com
www.dartaero.com

DART
AEROSPACE

Container No: S059570



Part: D412-664-203
Job No: 173463
Serial No/Batch: S059570
Revision:
Inspector:

Date: 04/10/18

Job Routing									
Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	3/8/18	3/8/18	0.00	0.00	Start Up Stores/Pkg-1		GP
110	Packaging	1 pcs	3/8/18	3/8/18	0.00	0.00	Packaging1-4		GP
120	CNC Bend Crosstubes	1 pcs	3/8/18	3/8/18	0.00	5.26	CNC Bend Crosstube		GP
130	QC	1 pcs	3/8/18	3/8/18	0.00	0.00	QC15		GP
140	Crosstubes	1 pcs	3/8/18	3/8/18	0.00	3.33	Crosstubes-2		GP
160	HandFXtube	1 pcs	3/9/18	3/9/18	0.00	1.03	HandFinish5		GP
165	QC	1 pcs	3/9/18	3/9/18	0.00	0.00	QC7-3		38 DAS
170	QC	1 pcs	3/9/18	3/9/18	0.00	0.00	QC5		9-89 38
180	Outsource	1 pcs	3/15/18	3/15/18			SKY002-VC P1039607		CD 18/04/17 Ar 11.6.17
190	Packaging	1 pcs	3/15/18	3/15/18	0.00	0.00	Packaging2		AT 19/04/17 38
200	QC	1 pcs	3/15/18	3/15/18	0.00	0.00	QC5		38
210	SprayPaint	1 pcs	3/15/18	3/15/18	0.00	1.47	Spray Paint		06/05/2018 Jmo
220	QC	1 pcs	3/15/18	3/15/18	0.00	0.00	QC14		AS MAY 06 2018
230	Crosstubes	1 pcs	3/16/18	3/16/18	0.00	3.33	Crosstubes-2		AS MAY 25 2018
240	QC	1 pcs	3/16/18	3/16/18	0.00	0.00	QC5		EB
250	Packaging	1 pcs	3/16/18	3/16/18	0.00	0.00	Packaging1-4		MAY 30 2018
260	QC	1 pcs	3/16/18	3/16/18	0.00	0.00	QC4		JUN 05 2018
265	DC	1 pcs	3/16/18	3/16/18	0.00	0.00	DC		JUL 27 2018
270	Packaging	1 pcs	3/16/18	3/16/18	0.00	0.00	Packaging3-2		8-86 JUN 05 2018
280	QC21-FG	1 Ea	3/16/18	3/16/18	0.00	0.00	QC21		21 JUL 27 2018

Part Op 120 - Bend tube as per Dwg D412-664-243 using CNC bender program 412-aft and Folio FT010
Descriptions: 140 - 1-Drill pilot holes in tube as per Dwg D412-664-243 using drill Jlg DT8550 & DT8551 and drill table DT8577 using #9 holes as per QSI 10 to install towers. 2-Ream hole to finish size in tube as per Dwg D412-664-243 using drill Jlg DT8550 & DT8551. Check dimensions between holes, both sides on both cuffs, to ensure alignment with saddle holes. 3-SCRIBE PART # & BATCH # ACCORDING TO NOTE 6 4-*** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** Deburr & inspect for surface damage. Repair damage within limits as per Dwg D412-664-243
160 - ***IMMEDIATELY AFTER GRINDING***
170 - INSPECT ENGRAVING AND BATCH #
180 - *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***
190 - *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***
200 - *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** Inspect for damage & ensure results are as per Dwg D412-664-203
210 - *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** **VERIFY BY _____ BATCH # TO MATCH W/O M138607 1-Prime inside and outside crosstube as per QSI 005 4.2 AND DWG PRIMER: _____ START TIME: 138846 2-Paint outside crosstube with White Imron as per DWG D412-664-243 and QSI 005 4.2 3- Apply clear coat after paint as per DWG
220 - Then, Wrap in plastic bag to protect from scratches
230 - Assemble as per Dwg D412-664-203 1- Install center support using scoth-weld DP460 per QSI 015, as per DWG. note 13. Install supports clamps using as per Dwg D412-644-243. Install clamp with rubber cushion as per DWG. note 14. ***ENSURE CLAMPS ARE ON TOP OF CROSSTUBE SUPPORT*** Torque clamps on support to 80-100 IN-LBS AS PER DWG. EXP DATE: _____ 2- **IF NOT ALREADY PRESENT ON CHAFFING SHEILD.** Apply a thin coat of proseal 890 per QSI 015 on inside concave surface of chaffing shield and let cure per manufacturer's instructions. Install prosealed chaffing shield onto crosstube by applying a thin coat of proseal 890 onto crosstube. Be sure to eliminate any air gaps. Install and torque clamps on chaffing shield to 40-50 IN-LBS AS PER DWG. EXP DATE: _____ AFTER FINISH CURE TIME 24H START CURE TIME: 18-5-25 FINISH CURE TIME: 18-5-26
240 - ***RE-CHECK TORCQUE ON CLAMP AFTER PROSEAL HAS CURED FOR 24HOURS AS PER DWG.***
265 - Photocopy bluefile and create labels as per PPP D412-664-203 CHG 010
270 - Identify and pack for shipping as per PPP D412-664-203 *****Ensure tube is not packaged if curing time is less than 12 hrs, see step 27 for application time & date ***** Time & date of packaging: _____
Location: _____
280 - 1- *****LAY DOWN CORSTUBE ON TABLE AND PUT DT10302 PINS IN SADDLE HOLE FACING UP TO LOCATE CENTER OF CROSSTUBE***** Install center support using scoth-weld DP460 per QSI 015, as per DWG. note 13. Install supports clamps using as per Dwg D412-644-243. Install clamp with rubber cushion as per DWG. note 14. ***ENSURE CLAMPS ARE ON TOP OF CROSSTUBE SUPPORT*** Torque clamps on support to 80-100 IN-LBS AS PER DWG. 1- *****LAY DOWN CORSTUBE ON TABLE AND PUT DT10302 PINS IN SADDLE HOLE FACING UP, USE HOLE IN TAPE MESURE TO PUT IN PINS FOR LOCATING CENTER OF CROSSTUBE. ***** Install center support using scoth-weld DP460 per QSI 015, as per DWG. note 13. Install supports clamps using as per Dwg D412-644-243. Install clamp with rubber cushion as per DWG. note 14. ***ENSURE CLAMPS ARE ON TOP OF CROSSTUBE SUPPORT*** Torque clamps on support to 80-100 IN-LBS AS PER DWG.

Job BOM				
Part / Item	Component Name	Quantity	Operation	Container
D412-664-203TRN	Crosstube Turning Detail	1 Ea (1 ea)	90-Start up Operation	
D2896-1	Support	1 Ea (1 ea)	230-Crosstubes	
D3189-1	Chaffing Shleld	2 Ea (2 ea)	230-Crosstubes	
D3595-063-570	Rubber Cushion 0.63" Wide X 5.70" Long	2 Ea (2 ea)	230-Crosstubes	
MS21920-28	Clamp	4 Ea (4 ea)	230-Crosstubes	
MS21920-30	Clamp	2 Ea (2 ea)	230-Crosstubes	
AN6-40A	3/8-24 Bolt X 3" Long	4 Ea (4 ea)	250-Packaging	5019412
AN6-41A	Bolt	2 Ea (2 ea)	250-Packaging	5005844
MS21042L6	Nut	6 Ea (6 ea)	250-Packaging	5041168
NAS1149D0663J	Washer	18 Ea (18 ea)	250-Packaging	5043782
Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D412-664-203TRN	1	4	0
230-Crosstubes	D2896-1 F153195	①	5	0
	D3189-1 5029795	②	25	0
	D3595-063-570 B164719-150	②	31	0
	MS21920-28 5024879	④	99	0
	MS21920-30 5005127	②	55	0
	AN6-40A	4	156	0
250-Packaging	AN6-41A	2	91	0
	MS21042L6	6	536	0
	NAS1149D0663J	18	1,740	0
Part Specifications				
Specifications could not be found.				

Plex 3/2/18 9:37 AM Dart.Gagnon.Michelle

4 SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 173463.maf
MAR 02 2018

Item	Qty	Part Number	Description
1	X	D412-664-243	CROSSTUBE ASSEMBLY (412 HIGH AFT)
2	1	D8009-129	CROSSTUBE
3	2	D3586-065-570	RUBBER CUSHION
4	1	D2886-1	SUPPORT
5	2	D3189-1	CHAFING SHIELD
7	4	MS21820-28	CLAMP
8	2	MS21820-30	CLAMP (OR MS21820-32)
9	AR	SCOTCH-WELD DP460	EPOXY ADHESIVE, 3M SCOTCHWELD
10	AR	PROSEAL 880 B-2	SEALANT

GENERAL NOTES:

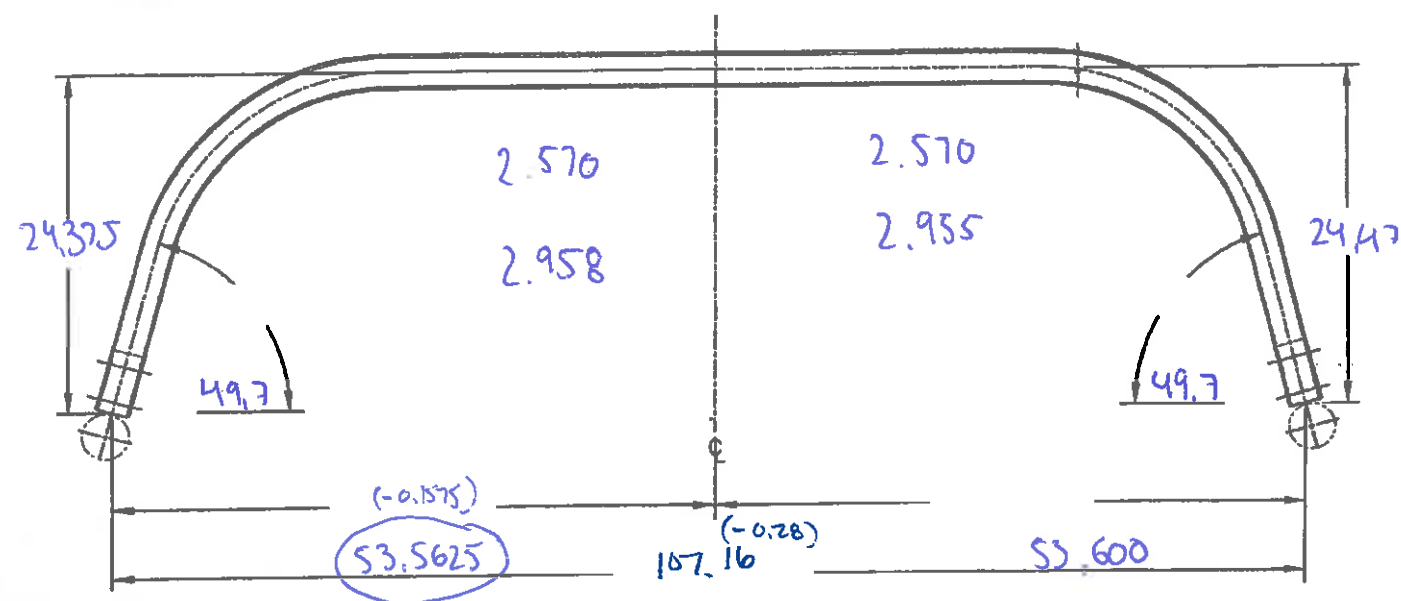
- 1) MATERIAL: MANUFACTURED FROM D8009-129
FINISHED LENGTH = 124.100±0.020 (BEFORE BENDING)
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
MASK UNDERSIDE OF CROSSTUBE AS SHOWN (ZN C6-2, HATCHED AREA)
PAINT OUTSIDE PER DART QSI 005 4.2
AFTER PAINTING, REMOVE MASKING AND APPLY MATTE CLEAR COAT
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED.
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
 - 6) IDENTIFICATION: DART PIN "D412-664-243" AND BIN ON INSIDE OF CUFF PER QSI 044 B-4 (VIBRATING STYLUS)
 - 7) WEIGHT: 47.0 lbs
 - 8) PART IS SYMMETRIC ABOUT CENTERLINE
 - 9) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. DO NOT GRIND TUBE AFTER SHOT PEEN.
 - 10) WHEN TRANSITIONING TO STOCK MAT'L, RUN CUTTER OFF PART. BLEND OUT EDGE LONGITUDINALLY. TRANSITION SHOULD BE SMOOTH.
 - 11) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 7% (BASED ON O.D.) IN LOWER HALF OF R30 BEND AND 8% (BASED ON O.D.) ON REMAINING TUBE.
 - 12) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 036. TO BE PERFORMED AFTER FINAL POST-BEND GRINDING. ANY ADDITIONAL GRINDING REQUIRES ANOTHER LPI INSPECTION.
- ASSEMBLY
- 13) INSTALL D2886-1 CENTER SUPPORT USING A 0.04" TO 0.07" THICK LAYER OF SCOTCH-WELD DP460 PER QSI 015.
 - 14) INSTALL MS21820-30 CLAMPS (OR -32) WITH D3586-065-570 RUBBER CUSHIONS TO SECURE THE D2886-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE ON TOP SIDE OF CROSSTUBE.
 - 15) APPLY A THIN COAT OF PROSEAL 880 ON INSIDE CONCAVE SURFACE OF D3189-1 CHAFING SHIELD AND LET CURE PER MANUFACTURER'S INSTRUCTIONS. INSTALL PROSEAL 880 ON INSIDE CONCAVE SURFACE OF D3189-1 CHAFING SHIELD ONTO CROSSTUBE BY APPLYING A THIN COAT OF PROSEAL 880 ONTO CROSSTUBE. BE SURE TO ELIMINATE ANY AIR GAPS.
 - 16) TORQUE CLAMPS ON D2886-1 SUPPORT 60 TO 100 IN-LB. TORQUE CLAMPS ON D3189-1 CHAFING SHIELD 40 TO 60 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER ADHESIVES HAVE CURED FOR 24 HOURS.

RELEASED
2014-05-26

F	NOTES RE-ORDERED. SCOTCH-WELD WAS MAGNIBOND (C8-1). ADD CLAMP RETORQUE (A8-1). REMOVE ABRASION STRIP. ADD INSPECTION WINDOW (C8-1). CHAFING SHIELD NOW 4.38 WIDE (C8-2). ADD 7% CRUSHING (B6-1). CHG BEND HEIGHT TOL. TO ±0.28 (C1-3). CHG CUFF TOL. (D2-4). CLAMPS FLIPPED TO PREVENT CHAFING (B7-3, B7-5). INCORP. DED E-2/4.	CP	14.04.01
E	REFORMAT/REVISE GENERAL NOTES: REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS; RELOCATED FLAG #6 PER PAR 06-048 (Z1 A8-3); ADD TOLERANCE (Z1 B6-3, C4-3, C5-3 & C5-5); MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4.	RF	06.06.30
D	REMOVE D2732-066, CHANGE TO D5665-065-570	PH	07.03.06
C	MAGNIBOND 8386, MS21820-32 WAS MS21820-30	MB	06.10.27
B	ADD HOLES FOR COMPATIBILITY WITH BHT/AA SKIDTUBES	PH	05.02.04
A	NEW ISSUE	BY	01.10.17
REV.	DESCRIPTION	DATE	
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	14.04.01		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. D412-664-243			
SHEET 1 OF 4			
TITLE CROSSTUBE ASSEMBLY (412 HI AFT)			
SCALE NTS			
COMPANY: DART AEROSPACE LTD 1000 SHEPPARD AVENUE EAST, SUITE 100 HAWKESBURY, ONTARIO L0C 1H0 TEL: 905-882-1111 FAX: 905-882-1112			

DART AEROSPACE LTD	Work Order: 173463	
Description: Crosstube High Aft (412)	Part Number: D412-664-203	
Inspection Dwg: D412-664-243 Rev: F		Page 1 of 1

Required Dimension	Min	Max
Height	24.12	24.62
1/2 Span	53.59	53.85
Angle	49	52
Total Span	107.18	107.70
Bending Passes	8	--
Crushing	--	7%



	Side A	Side B
Bending Passes	7	8
Crushing	7%	7%
Comments		

QC15 Inspection	
Date	

Rev	Date	Change	Revised by	Approved
A	07.02.08	New Issue	KJ/JM	
B	07.05.08	Dimensions updated per Dwg rev. D	KJ/JLM	
C	10.02.02	Dwg Rev updated	KJ	
D	12.04.16	Added bending, crushing dimensions	KJ	
E	14.09.08	Max crushing % revised	KJ	

DQA: _____ Date: _____

DEC 13 2018

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____

DAS

9-89

53



Work Order update only

Work Order: 9-89 53 73463		DISPOSITION		AGAINST DEPARTMENT/PROCESS																																																																																					
Part No. D412-664-203		Rework Scrap Use-as-is		Cross tube Small Fab Finishing Composite		Water Jet Prod. Eng. Coord. Rec/Store/Packaging Supplier																																																																																			
NCR No. 18-7038		Suspected Unapproved		Skid-tube Machining Thermoforming Large Fab		Engineering Quality Other																																																																																			
Date: 18/4/12		Step #: 120		QTY Effective: 1																																																																																					
Description Work Order Deviation				Disposition																																																																																					
Tube is bent narrow. One width is 0.16 under nominal. Overall width is 0.28 under nominal.				Acceptable. Will not cause fit issue. Within what has been accepted in the past without issue.																																																																																					
Root Cause				FAULT CATEGORY																																																																																					
<table><tr><td>Environment</td><td>No Re-verification</td><td>Pressure/Forced</td><td>Temperature/Cure</td><td>Power Loss/Surge</td><td>Positioned Wrong</td></tr><tr><td>Design</td><td>Operator</td><td>Bending</td><td>Set-up</td><td>Folio/Program</td><td>Outside Dimensions</td></tr><tr><td>Doc/Data</td><td>Offset/Setup</td><td>Centre Not Concentric</td><td>BOM/Route</td><td>Grain</td><td>Over/Under tolerance</td></tr><tr><td>Equip/Tooling</td><td>Supplier</td><td>Cracks</td><td>Broken/Damage/Defect</td><td>Weld</td><td>Part Incorrect</td></tr><tr><td>Handling/Pre</td><td>Training</td><td>Crimp/Kink/Ripple/Wave</td><td>Inspection Incomplete/Unqualified</td><td>Wrong Stock Pulled</td><td>Part Lost/Missing</td></tr><tr><td>Material</td><td>Use for Testing</td><td>Cuffs</td><td>Contamination</td><td>Out of Sequence</td><td>Part Moved</td></tr><tr><td>Internal Transport</td><td>Poor Information</td><td>Crushing</td><td>Countersink</td><td>Off-set</td><td>Drawing</td></tr><tr><td>Tribal Knowledge</td><td>Rushing</td><td>Heat Treat</td><td>Cut Too Short</td><td>Mislabeled</td><td>Finish</td></tr><tr><td>LOA</td><td>Product Improvement</td><td>Wave/Twist in Tube</td><td>Instructions Incomplete/Unclear</td><td>Fit/Function</td><td>Misread</td></tr><tr><td>Substation</td><td>Process Improvement</td><td>Marks/Chatter</td><td>Drill Holes</td><td>Misaligned/off center</td><td>Turning Sequence</td></tr><tr><td>Past Expiry Date</td><td>Manufacturing Process</td><td colspan="2">OTHER :</td><td colspan="2"></td></tr><tr><td>Misidentified</td><td>Past Due</td><td colspan="2"></td><td colspan="2"></td></tr></table>				Environment	No Re-verification	Pressure/Forced	Temperature/Cure	Power Loss/Surge	Positioned Wrong	Design	Operator	Bending	Set-up	Folio/Program	Outside Dimensions	Doc/Data	Offset/Setup	Centre Not Concentric	BOM/Route	Grain	Over/Under tolerance	Equip/Tooling	Supplier	Cracks	Broken/Damage/Defect	Weld	Part Incorrect	Handling/Pre	Training	Crimp/Kink/Ripple/Wave	Inspection Incomplete/Unqualified	Wrong Stock Pulled	Part Lost/Missing	Material	Use for Testing	Cuffs	Contamination	Out of Sequence	Part Moved	Internal Transport	Poor Information	Crushing	Countersink	Off-set	Drawing	Tribal Knowledge	Rushing	Heat Treat	Cut Too Short	Mislabeled	Finish	LOA	Product Improvement	Wave/Twist in Tube	Instructions Incomplete/Unclear	Fit/Function	Misread	Substation	Process Improvement	Marks/Chatter	Drill Holes	Misaligned/off center	Turning Sequence	Past Expiry Date	Manufacturing Process	OTHER :				Misidentified	Past Due					<table><tr><td>Completed By</td><td>MRB (QSI042) Approval</td></tr><tr><td>DAS</td><td>DAS</td></tr><tr><td>12</td><td>12</td></tr><tr><td>9-89</td><td>9-89</td></tr><tr><td>18/4/12</td><td>18/4/12</td></tr></table>				Completed By	MRB (QSI042) Approval	DAS	DAS	12	12	9-89	9-89	18/4/12	18/4/12
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Lead hand / Supervisor Approval Verification				QC / QA Coordinator Approval																																																																																					
AD 18-08-14				AD 18-08-14																																																																																					



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER
PO039607

Supplier: SKY002-VC
Skyservice
6120 Midfield Road
Mississauga
ON
L5P 1B1 Canada
Phone: 905-678-5636
Fax: 905-678-5841

PO No: PO039607
PO Date: 4/16/18
Due Date: 4/18/18
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Lavoie, Chantal
Phone: clavoie@dartaero.com

E-MAILED

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items										
Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	173464	D412-664-203	Aft Crosstube - High *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***	Firmed	4/18/18	1 pcs	0 pcs	1 pcs	\$208.75/pcs	\$208.75
	173465			Firmed	4/18/18	1 pcs	1/0 pcs	1 pcs	\$208.75/pcs	\$208.75
	173466			Firmed	4/18/18	1 pcs	1/0 pcs	1 pcs	\$208.75/pcs	\$208.75
	173463			Firmed	4/18/18	1 pcs	1/0 pcs	1 pcs	\$208.75/pcs	\$208.75
Sub Total:						4	0	4		\$835.00

Grand Total: \$835.00

Order Notes

paid At 18/04/17

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 4/17/18 7:53 AM dart.lavoie.chantal

 **skyservice**

Work Order Traveler
Sky Service F.B.O. Inc.

10105 Ryan Avenue, Dorval, Quebec, H9P 1A2

TCCA AMO 53-89 / EASA 145.7142 / BDA AMO 385

WO #: MWO35668	Customer: Dart Aerospace Ltd.	Dept: NDT YUL	Reference: PO039607
Descr:	PN:	S/N:	Qty: 1
Make:	Model:	Reg:	A/C S/N:
TSN:	CSN:	TSO:	

Task: UNSCHEDULED	Sequence: 1
-------------------	-------------

Work Required:

CARRY OUT NDT (LIQUID PENETRANT CRACK TEST) ON THE FOLLOWING FOUR (4) CROSSTUBES:

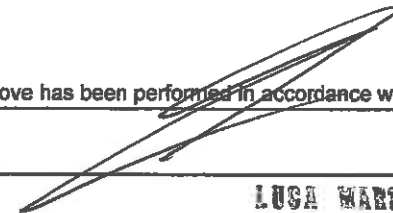
P/N: D412-664-203 Aft CROSSTUBE-HIGH

1- JOB SHEET# 173463 2- JOB SHEET# 173464
3- JOB SHEET# 173465 4- JOB SHEET# 173466

Action Taken:					Date:	Initial/Stamp:
LIQUID PENETRANT INSPECTION CARRIED OUT ON ITEMS LISTED ABOVE (ITEMS 1-4) AS PER ASTM1417M-13					APR 16 2018	LM DOT-APP 278 53-89
NO CRACK FOUND						
PEN (ZL-56, MPO13600), DEV. (SKD-S2, MPO11715), CLEANER (SKC-S, MPO19368)						

Description	Location	P/N	Qty	Batch	S/N Off	S/N On

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

Signature:		ACA/SCA Stamp	Date:
Name:		DOT-APP 278 53-89	APR 16 2018

5.0 PARTS LIST

JUN 05 2010

5.1 HIGH GEAR CROSSTUBES

145
6
289

Item	QTY -101	QTY -201	QTY -203	Part Number	Description
	X			D212-664-101	CROSSTUBE INSTALLATION, 204/205/210/212/214/412, UH-1H, UH-1A/B/E/F/L/P, TH-1F/L, HH-1K HIGH FWD
		X		D212-664-201	CROSSTUBE INSTALLATION, 204/205/210/212/214, UH-1H, UH-1A/B/E/F/L/P, TH-1F/L, HH-1K HIGH AFT
			X	D412-664-203	CROSSTUBE INSTALLATION, 412 HIGH AFT
1	1			D212-664-141	CROSSTUBE ASSEMBLY, 204/205/210/212/214/412, UH-1H, UH-1A/B/E/F/L/P, TH-1F/L, HH-1K HIGH FWD
2		1		D212-664-241	CROSSTUBE ASSEMBLY, 204/205/210/212/214, UH-1H, UH-1A/B/E/F/L/P, TH-1F/L, HH-1K HIGH AFT
3			1	D412-664-243	CROSSTUBE ASSEMBLY, 412 HIGH AFT
10	2			* D2893-1	SUPPORT
11	4			* D3595-063-450	RUBBER CUSHION
12	4			* MS21920-25	CLAMP (OR MS21920-26)
13	4			AN6-35A	BOLT
14	4			AN6-36A	BOLT
15	6			MS21042L6	NUT (OR MS21042-6)
16	18			AN960JD616	WASHER
20		2		* D2940-1	SUPPORT
21		4		* D3595-063-530	RUBBER CUSHION
22		4		* MS21920-28	CLAMP (OR MS21920-30)
23		4		AN6-40A	BOLT
24		2		AN6-41A	BOLT
25		6		MS21042L6	NUT (OR MS21042-6)
26		18		AN960JD616	WASHER
30			1	* D2896-1	SUPPORT
32			2	* D3595-063-570	RUBBER CUSHION
33			4	* MS21920-28	CLAMP
34			2	* MS21920-30	CLAMP (OR MS21920-32)
35			4	AN6-40A	BOLT
36			2	AN6-41A	BOLT
37			6	MS21042L6	NUT (OR MS21042-6)
38			18	AN960JD616	WASHER
39			2	* D3189-1	CHAFING SHIELD
50	1	1		D3428-1	PLACARD

* REFERENCE ONLY. PARTS ARE INCLUDED IN D212-664-141/-241 OR D412-664-243 ASSEMBLIES ABOVE.
NOTE: KITS INCLUDE EXTRA HARDWARE FOR COMPATIBILITY WITH BOTH DART AND BELL/AAI SKIDTUBES.